Remark

Applicants respectfully request reconsideration of this application as amended.

No claims have been amended. Claims 2, 17, and 24 have previously been canceled.

Therefore, claims 1, 3-16. 18-23 and 25-26 are now presented for examination.

35 U.S.C. §112 Rejection

The Examiner has rejected claims 16-22 under 35 U.S.C. §112, first paragraph, as

failing to comply with the enablement requirement. The Examiner writes that there is

inadequate support for "an article of manufacture comprising a computer readable

medium including a content that when read by a computer causes the computer to..."

In the original specification the network node 100 of Figure 1 is shown as having

subsystems. The subsystems perform operations described on page 5, lines 2-10. These

processes are similar to those recited in Claim 16. The following paragraph (paragraph

14) explains that subsystems are for processing and "may be a thread of a network

processor core, a thread of a network processor microengine, or a thread of an adjunct

processor, such as a digital signal processor (DSP)."

A thread is a portion of software running on some type of processor. In this case,

the named hardware examples are a processor core, a processor microengine, or a

processor. One skilled in the art would recognize that to run software on any of these

types of hardware requires the software thread to be stored in a memory that is available

to the hardware. This is the conventional way of running a thread on such hardware. The

named hardware examples all include internal storage for software and usually also

include a bus to access external memory for additional software.

Docket No: 42P16530   2
Application No.: 10/607,728

Claim 16 refers to (1) an article of manufacture comprising a computer readable medium. Such an article is the memory that will store the software thread for the hardware. Claim 16 refers also to (2) including a content that when read by a computer causes the computer to..." This is the operation of any of the named hardware types when running the software thread that would be stored in the memory.

As to the "computer" versus a processor core, a processor microengine and a processor, the Patent Office has typically interpreted all of these things to be computers. All of the named hardware examples have processing resources that operate on inputs to produce outputs based on software. The physical configuration of the device as being in a few chips, or even one chip rather than a stand-alone device does not prevent it from performing as a computer. One of ordinary skill would also recognize that a "network node 100" has a physical hardware architecture that is very similar to that of a desktop computer workstation.

35 U.S.C. §103 Rejection

Chen and Lodha

The Examiner has rejected claims 1, 2, 4-6, 9-13, 15-19, 21-24 and 26 under 35 U.S.C. §103 (a) as being unpatentable over Chen et al., U.S. Patent No. 6,975,638 ("Chen"), in view of Lodha, U.S. Patent No. 7,330,430 ("Lodha"). Lodha is newly cited. The current remarks shall begin with the primary reference Chen.

1.   Chen does not show "regulating rates at which traffic moves out of the queues"

On page 3, third paragraph, the Examiner writes "Chen fails teach for regulating the rates at which traffic moves out of the queues with a traffic shaping algorithm." On

Docket No: 42P16530   3
Application No.: 10/607,728

page 3, lines 12 et seq., the Examiner writes, "[Chen discloses] one or more traffic

shapers 124-126 to regulate the rate at which at which traffic moves in of the queues."

Applicants assume that the first statement controls ("Chen fails teach...").

Otherwise, the Examiner would not have presented the new reference Lodha.

Accordingly, Chen does not show "regulating rates at which traffic moves out of the

queues" as recited in the claims.

2   Chen does not show "classifying each packet into [a flow bundle]

based on the packet's destination and path through the switch fabric and queuing

each packet... based on the flow bundle"

Applicants note, initially, that "path through the switch fabric" does not appear to

be mentioned at all in Chen and therefore, even the MMU of Chen does not show

determining a path to be taken through the switch fabric. The Examiner cites Col. 7,

lines 26-29 which describe taking a switching fabric egress port to a destination line card

and the destination port on that line card obtained from a classification lookup table.

However, this information is not used to queue packets into the packet FIFO or into the

packet pipeline.

Accordingly, Chen does not queue packets in path-based flow bundles as recited

in the claims.

3.   Chen does not show operations in the order required by Claim 1

Figure 7 of Chen makes it clear that incoming data packets are:

a) Classified (C1, C2), then

b) Placed in the Packet FIFO (F1, F2), then

c) Placed in the Packet Pipeline 122, then

d) Monitored 124/Conditioned126/Scheduled136, then

Docket No: 42P16530   4
Application No.: 10/607.728

e) Placed into MMU (Memory Management Unit) 132; and then

f) Sent to the Switch Fabric 134.

In Claim 1, there is an order that is required by the connections between the operations. These connections are suggested in parentheses below. As an example, the packets cannot be classified until the path is determined because the classifying is based in part on the path. The resulting order of operations is as follows:

a) Determining the path, then

b) Classifying (based on the path), then

c) Mapping into queues (based on the classification), then

d) Queuing (into the mapped queues), then

e) Regulating the traffic rate (traffic moves out of the queues).

The chart above shows how the ordering is different. It is not sufficient for the Examiner to find similar operations. The connections between the claim elements must also be found in the prior art or be obvious. In the present example, the ordering between elements is important to the operation of the reference as well as for the claimed invention. Since the Examiner has not found such an ordering, Chen is insufficient to render the claim obvious.

The difference in ordering further shows how Chen does not queue packets in path-based flow bundles as recited in the claims.

4.   Lodha's traffic rate shapers have no connection with the queueing of the present invention.

While Lodha shows traffic rate shapers in another context, the benefits of the present invention require, in part, that the packets be queued in path-based flow bundles. While the queueing is not important in the context of Lodha, for a network node, the

Docket No: 42P16530   5
Application No.: 10/607,728

queueing can present significant advantages when combined with "regulating rates at which traffic moves out of the queues" and with "scheduling the packets in the queues for transmission."

While only Claim 1 has been discussed above, the remaining claims are believed to be allowable on the same grounds, inter alia. These are not addressed specifically in order not to unduly burden the Examiner.

35 U.S.C. §103 Rejection

Chen, Lodha and Hooman or Duffield

The Examiner has rejected the remaining claims under 35 U.S.C. §103 (a) as being unpatentable over Chen , Lodha, and in further view of Hooman et al., U.S. Patent No. 7,155,716 ("Hooman") or Duffield et al., U.S. Patent No. 6, 452,933 ("Duffield"). These rejections rely on the Chen rejection discussed above and are traversed on the same grounds, inter alia.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

Docket No: 42P16530   6
Application No.: 10/607.728

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there

remains any issue with allowance of the case.

Request for an Extension of Time

Applicants respectfully petition for an extension of time to respond to the

outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary.

Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37
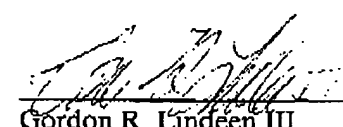
C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: <u>April 1, 2008</u>

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Docket No: 42P16530   7
Application No.: 10/607,728